

Message

**From:** Chung, Angela [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=B3E49FCBA1AD46F1BDBE92EBB4936350-CHUNG, ANGELA]  
**Sent:** 9/18/2015 9:22:28 PM  
**To:** Szelag, Matthew [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=f1e48230d96943f8acb72810e32ce8d6-Szelag, Matthew]  
**CC:** Collins, Kathleen [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=9d85953bc0b74bebbbd8f2a53b9da5f9-Collins, Kathleen]  
**Subject:** RE: Washington ammonia

Also, I was talking with Dan about aquatic life criteria and human health criteria and made the general statement that ALC, with the exception of arsenic, are generally lower (more stringent) than HHC. He wanted to know how rock solid a position that is and whether there is more than arsenic where we would say HHC is more stringent. Any thoughts on that too?

Angela Chung  
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**From:** Szelag, Matthew  
**Sent:** Friday, September 18, 2015 2:07 PM  
**To:** Chung, Angela  
**Cc:** Collins, Kathleen  
**Subject:** RE: Washington ammonia

Yes, it always looks like the chronic numbers are more stringent than the acute. I think **Deliberative Process / Ex. 5**  
In general, I think **Deliberative Process / Ex. 5**

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Copying Kathleen to see if she has any additional thoughts.

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**From:** Chung, Angela  
**Sent:** Friday, September 18, 2015 1:24 PM  
**To:** Szelag, Matthew  
**Subject:** RE: Washington ammonia

Thanks Matt. I'm assuming the chronic are more stringent than the acute? **Deliberative Process / Ex. 5**  
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**From:** Szelag, Matthew  
**Sent:** Tuesday, September 15, 2015 11:11 AM  
**To:** Chung, Angela  
**Subject:** RE: Washington ammonia

Hi Angela,  
Comparing the stringency of WA's current ammonia criteria to our 304(a) recommendations is fairly complex, but I'll try to summarize generally. Kathleen helped out by providing the attached spreadsheet, which I can walk you through if you want more details.

**Freshwater Acute:** WA uses EPA's 1999 304(a) recommendations for both salmonids present and salmonids absent. Using the assumption that most WA waters are designated for salmonid uses, I will focus the comparison on that version of the criteria. In general, these numbers are the same as the 2013 304(a) recommendations, until temperatures get warmer – between approximately 15C-20C. Around that temperature range, the 2013 recommendations are more stringent than WA's criteria.

**Freshwater Chronic:** WA uses EPA's 1985 304(a) recommendations for salmonid habitat. WA uses EPA's 1999 304(a) recommendations for no salmonid habitat/no other fish early life stage as well as no salmonid habitat/other fish early life stage present. Using the assumption that most WA waters are designated for salmonid uses, I will focus the comparison on that version of the criteria. Using that assumption, WA's criteria are more stringent than the 2013 recommendations (with the caveat that this may not be the case in waters that are not designated for salmonid use). It's my understanding that NMFS liked the 1985 chronic criteria in Oregon.

**Marine Acute & Chronic:** Ecology uses EPA's 304(a) recommendations from 1989 which are the most current values EPA has published.

Let me know if you want to discuss further. Thanks,

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**From:** Chung, Angela  
**Sent:** Monday, September 14, 2015 3:27 PM  
**To:** Szelag, Matthew  
**Subject:** RE: Washington ammonia

Yeah, I think

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## **Deliberative Process / Ex. 5**

criteria. Can you tell me what Ecology currently has on the books for ammonia and how it compares to the 2013 criteria? Thanks.

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**From:** Szelag, Matthew  
**Sent:** Monday, September 14, 2015 2:27 PM  
**To:** Chung, Angela  
**Subject:** FW: Washington ammonia

Hi Angela,  
FYI – We didn't discuss today, but I think

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**From:** Collins, Kathleen  
**Sent:** Friday, March 08, 2013 11:26 AM  
**To:** Szelag, Matthew  
**Subject:** Washington ammonia

Hey Matt, I was cleaning out some files and ran across this email...

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**Deliberative Process / Ex. 5** but Melissa Gildersleeve called Jannine Jennings and said she wanted it to be part of the final package.

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*Kathleen Collins*

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